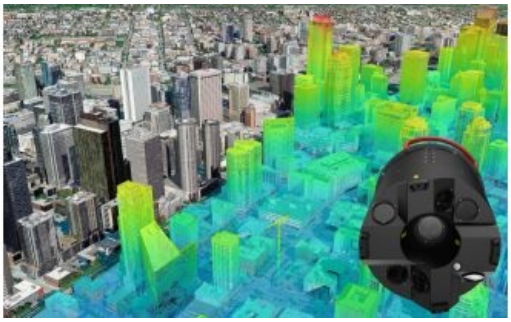
Leica Geosystems Announces Major Efficiency Improvement to Airborne Urban Mapping Solution



Leica Geosystems, part of Hexagon, has introduced the Leica CityMapper-2. This next-generation hybrid oblique imaging and Lidar sensor provides fast and efficient digitization of cities. As part of Leica Geosystems' RealCity solution, which combines the CityMapper-2 with the Leica HxMap high-performance processing workflow, the new sensor is designed to provide faster updates while preserving image quality over a wide range of flying conditions.

The most significant improvement comes from the newly developed optical system incorporating two nadir (RGB & NIR) and four oblique 150 MP metric cameras using CMOS technology and equipped with Leica Geosystem's unique mechanical forward-motion-compensation (FMC). The Lidar sensor's pulse repetition frequency has been increased to 2 MHz and features gateless Multiple-Pulses-in-the-Air (MPiA) technology.

"This newly developed hybrid oblique imaging and Lidar sensor is the most advanced airborne sensor in the market for highly-productive creation of 3D digital twins," said John Welter, Hexagon's Geospatial Content Solutions president. "We are pleased to offer a solution that transforms the way our industry enables the digitization of the world we live in to help manage it in the most efficient way."

High-accurate data capture in urban landscapes

The new optical system uses backside illumination (BSI) CMOS technology and customized low-distortion lenses specifically designed to deliver the highest image quality and photogrammetric accuracy without reducing collection efficiency. While traditional camera systems restrict operators to high shutter speeds or decreased aircraft speed to control image blur, mechanical FMC allows the CityMapper-2 to capture high quality imagery even in difficult lighting conditions with no reduction in efficiency.

The Lidar sensor delivers 3-centimetre range accuracy and is optimized for data capture in urban landscapes to deliver extremely accurate data and even point distribution across the data set.

CityMapper-2 is a compact package with embedded system controller and storage, which makes it easy to install in any survey aircraft. The system is available in two configurations for standard and high-altitude flights to meet customers' needs and local flight regulations.

Processing imaging and Lidar data in one interface

The sensor is supported by HxMap, the unified multi-sensor high-performance processing workflow available for all Leica Geosystems airborne sensors. The software suite has the capability to process imaging and Lidar data in the same user interface, reducing the training requirements for staff when processing data from different sensors. Combining the new CityMapper-2 with HxMap offers the foundation to produce all airborne data products for smart decision making in rapidly changing urban environments.

https://www.gim-international.com/content/article/leica-geosystems-announces-major-efficiency-improvement-to-airborne-urban-mapping-solution